

## **POSITION COMPUTATION IN A POSITIONING SYSTEM USING SYNCHRONIZATION TIME BIAS**

### **ABSTRACT**

In general, this disclosure is directed to techniques for computing a positioning solution for a mobile unit based on signals received from the satellite navigation system and the wireless communication system. The techniques allow for, and resolve, a synchronization bias that constrains a system time for the satellite navigation system and a system time for the wireless communication system relative to each other. The mobile unit may utilize the defined constraint to compute a position solution in environments where additional independent measurements would otherwise be required. The mobile unit may incorporate Receiver Autonomous Integrity Monitoring (RAIM) functionality to validate the position and time solutions derived from each of received signals. According to the techniques described herein, the mobile unit may be able to utilize the defined synchronization bias to apply RAIM or similar techniques in environments where such techniques would otherwise be indeterminate.